

The Sustainable Campus: The Green Campus Movement and Beyond

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Sustainability or sustainable development is usually defined as:

“Meeting the needs of the present without compromising the ability of future generations to meet their own needs”

The Green Campus Movement

A Green Campus can be defined as:

An educational institution that has implemented environmentally beneficial programs and practices. This includes both pollution prevention activities to minimize the environmental impact of campus programs and administrative operations, with the inclusion of environmental instructional materials in relevant courses.

The Green Campus Movement

1970: My personal green campus activities start as I worked to 'green' my high school and coordinate events for the first Earthday for New York State.

1974: Started to 'green' my first college and helped start the Alternative Energy Center and Center for the Study of the Future at Ramapo College of NJ.

1989: The National Wildlife Federation initiates their 'Campus Ecology' Program: This was really the sign that a national green campus movement had started.

1991: EPA and Department of Energy initiate a pilot project: Partnership for Environmental Technology Education (PETE).

The Partnership for Environmental Technology Education (PETE) is a non-profit organization established to facilitate, augment and broker academic, industrial and governmental partnerships to:

- * meet the education and environmental training needs of the nation,
- * promote environmental technology transfer,
- * foster the participation of underrepresented minorities and women in environmental fields, and
- enhance U.S. economic development and international competitiveness.

The PETE network consists of six regional public-private partnerships serving all fifty states, Puerto Rico and the U.S. territories. Its partners include over 400 community and technical colleges - which represent almost one-third of the two-year institutions in the United States, and multiple business, industry and governmental agencies.

The Green Campus Movement

2006: Developing out of the 2001 Education for Sustainability Western Network, and their successful North American conference in 2004, the Association of Sustainability in Higher Education (AASHE) was launched in 2006.

2008-09: A grant from the Illinois Department of Commerce and Economic Opportunity helped to start the Illinois Community College Sustainability Network. This organization is now called the Illinois Green Economy Network, and is working to set up sustainability and green job centers at all Illinois community colleges.

Sustainability Audit Topics

- Waste: solid/ medical/ hazardous/radioactive
- Water Quality/Use: wastewater/watersheds
- Landscaping/Pest Control/Use of Agricultural Chemicals
- Air Quality: outdoor/indoor
- Energy Consumption
- Transportation
- Food Services
- Procurement Policies and Contractors
- Curriculum
- Building Design
- Research
- Maintenance/Operations
- Endowment Investments/Donors

Conducting an Example Environmental Audit

•Food Services

Who operates organization food services?

Who is responsible for making decisions about menu planning?

What are your food services' purchasing criteria?

Do you have on-site food choices or lunch-time vans to cut down on employee travel?

a)Where do you get your food from? Is it locally grown or does it travel thousands of miles to get to you? Do you have an on-site employee garden?

b)What kind of foods do you buy and serve? Is it organically grown or were large amounts of pesticides and inorganic fertilizers used?

c)What kinds of dishes and utensils do you use? Do you use china and silverware and have to use energy and water to wash them? Do you use paper or Styrofoam plates and plastic utensils and have to throw them all away?

d)What happens with food waste and do you try to minimize waste? Do you compost your food waste or give it to others to do so or does it end up in a landfill? Do you use menu surveys to measure both appropriate serving sizes and figure out what people want to eat, so you cut down on waste?

- Automotive/Fleet Servicing

- a) If you have a fleet, can you use hybrid vehicles or alternative fuels, such as natural gas, clean diesel, or electric? Can you do the same with your suppliers?
- b) If you do any vehicle servicing, do you properly dispose of waste liquids, rags, and parts?
- c) Does your service area and parking lots have proper stormwater runoff controls to keep vehicle fluids, wash water, and all other contaminants out of the storm sewer?
- d) Do you provide incentives to get your students/employees out of SOVs (single occupancy vehicles)? Examples: Telecommuting, subsidize mass transit passes, lockers/showers for bicycles, and van or carpools vehicles and matching.

- Laboratory Research

- a) Do you have a plan to minimize the amounts of chemicals you use? (Small/Micro-scale chemistry)
- b) Do you properly dispose of all chemicals and hazardous materials?

- Landscaping

- a) Use of pesticides and inorganic fertilizers? Do you have a compost program?
- b) Can you use manual instead of power equipment?
- c) How do you conserve water?
- d) Do you plant native species?

•Facilities

- a) Have you changed over to compact or regular fluorescent bulbs? (Maybe even LCDs)
- b) Do you have motion sensors to turn off lights and control room thermostats?
- c) Have you tried to do any activities related to LEED certification?
- d) Have you looked at any sources of indoor air pollution?
- e) Have you set your thermostats to more reasonable levels(78 for cooling-68 for heating)

Cost Savings: Educational Institutions

Conservation Projects/Annual Revenues and Savings	
<u>Transportation</u>	
Getting Students and Staff Out of the Car at Cornell University, NY	\$3,123,000
Creating a Bus-Riding Campus at the University of Colorado-Boulder, CO	1,000,000
<u>Energy Conservation</u>	
Creative Strategies for Saving Energy at SUNY-Buffalo, NY	9,068,000
Lighting and Equipment Retrofits at Elizabethtown College, PA	247,000
A Four-Campus Energy Reduction Strategy at Brevard Community College, FL	2,067,000
Laboratory Renovations and More at Brown University, RI	15,500
Burning Better Lights in Dorm Rooms at Dartmouth College, NH	75,000
Solar Panels Generating Savings at Georgetown University, Washington, DC	45,000
<u>Water Conservation</u>	
New Toilets and Water Fixtures at Columbia University, NY	235,000
Cleaning Up with Water-Saving Showerheads at Brown University, RI	45,800
Dining Services	
Washable Cups in the Freshman Union at Harvard University, MA	186,500
Saving on Refillable "Red Mugs" at the University of Wisconsin-Madison, WI	11,400
<u>Re-Use</u>	
Sale of Surplus Property at the University of Wisconsin-Madison, WI	241,800
Maintaining Vehicles with Re-Refined Motor Oil at the University of Illinois-Urbana-Champaign, IL	3,500
Second Time Around for Chemicals at the University of Washington, WA	14,400
Management of Hazardous Chemicals Cutting Out the Weed-Killers at Seattle University, WA	1,300
Chemistry Classes with Fewer Chemicals at the University of Minnesota, MN	37,000
<u>Composting</u>	
Creating Fertilizer with Kitchen Food Waste at Dartmouth College, NH	10,000
Composting Landscape Waste and Scrap Wood at the University of Colorado-Boulder, CO	1,300
<u>Recycling</u>	
Award-Winning Materials-Recovery Program at the University of Colorado-Boulder, CO	107,000
Dining Services Recycling at Harvard University, MA	79,000
Getting Top Dollar from Paper Recycling at the University of Wisconsin-Madison, WI	120,000
Analyzing Wastes to Cut Costs at the University of Wisconsin-Madison, WI	21,000
TOTAL	\$16,755,500

Source: 'Green Investment, Green Return' National Wildlife Federation-Campus Ecology Program

Why Adopt a Sustainability Program?

- It is the right thing to do
- It let's us practice what we preach
- It better cements the ties between 'Gown' and 'Town'
- It can help colleges stay in compliance with State and Federal environmental regulations
- It can help colleges save money

AND

It is the right
thing to do!

Thank You

Any Questions?